



[4910-13-P]

**DEPARTMENT OF TRANSPORTATION**

**Federal Aviation Administration**

**14 CFR Part 39**

**[Docket No. FAA-2012-0426; Directorate Identifier 2011-NM-087-AD; Amendment 39-17659; AD 2013-23-04]**

**RIN 2120-AA64**

**Airworthiness Directives; The Boeing Company Airplanes**

**AGENCY:** Federal Aviation Administration (FAA), DOT.

**ACTION:** Final rule.

**SUMMARY:** We are adopting a new airworthiness directive (AD) for certain The Boeing Company Model 737-600, -700, -800, -900, and -900ER series airplanes. This AD was prompted by reports that certain seat track bolts were found with severed head bolts due to fatigue. This AD requires replacing titanium seat track bolts with corrosion resistant steel (CRES) bolts, repetitive inspections for cracking of the splice strap and forward seat track holes, and related investigative and corrective actions if necessary. This AD also provides an optional terminating action for the repetitive inspections. We are issuing this AD to detect and correct missing or severed bolt heads, which, if not corrected, could result in the inability of the seat track to carry passenger loads, which could cause the seats to detach from the seat track, resulting in possible injury to passengers during an emergency landing or survivable crash.

**DATES:** This AD is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in the AD as of [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

**ADDRESSES:** For service information identified in this AD, contact Boeing Commercial Airplanes, Attention: Data & Services Management, P. O. Box 3707, MC 2H-65, Seattle, Washington 98124-2207; telephone 206-544-5000, extension 1; fax 206-766-5680; Internet <https://www.myboeingfleet.com>. You may view this referenced service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, Washington. For information on the availability of this material at the FAA, call 425-227-1221.

#### **Examining the AD Docket**

You may examine the AD docket on the Internet at <http://www.regulations.gov>; or in person at the Docket Management Facility between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this AD, the regulatory evaluation, any comments received, and other information. The address for the Docket Office (phone: 800-647-5527) is Document Management Facility, U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC 20590.

**FOR FURTHER INFORMATION CONTACT:** Sarah Piccola, Aerospace Engineer, Cabin Safety and Environmental Systems Branch, ANM-150S, FAA, Seattle Aircraft Certification Office (ACO), 1601 Lind Avenue SW., Renton, WA 98057-3356; phone: 425-917-6483; fax: 425-917-6590; email: [sarah.piccola@faa.gov](mailto:sarah.piccola@faa.gov).

#### **SUPPLEMENTARY INFORMATION:**

##### **Discussion**

We issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 to include an AD that would apply to the specified products. The NPRM published in the Federal Register on May 8, 2012 (77 FR 26993). The NPRM proposed to require replacing titanium seat track bolts with CRES bolts, repetitive inspections for cracking of the splice strap and forward seat track holes, and related investigative and

corrective actions if necessary. The NPRM also proposed to provide an optional terminating action for the repetitive inspections.

### **Comments**

We gave the public the opportunity to participate in developing this AD. The following presents the comments received on the proposal (77 FR 26993, May 8, 2012), and the FAA's response to each comment. Boeing and United Airlines supported the NPRM.

### **Request to Revise Costs of Compliance Section**

American Airlines (American) requested that we revise the Costs of Compliance section of the NPRM (77 FR 26993, May 8, 2012). American explained that, since it alone operates 113 airplanes that are affected by the NPRM, several hundred airplanes should be affected.

We agree with the request to revise the Costs of Compliance section of this final rule because there was an error in the number of affected airplanes identified in the Costs of Compliance section of NPRM (77 FR 26993, May 8, 2012). We have updated the number of airplanes from 168 to 973 in the Costs of Compliance section of this final rule accordingly.

Although we have revised the cost calculation, there is no change to the actual number of airplanes affected by this final rule. This final rule refers to Boeing Special Attention Service Bulletin 737-53-1296, dated January 11, 2011, for affected airplanes. The effectivity of Boeing Special Attention Service Bulletin 737-53-1296, dated January 11, 2011, is correct. The number of affected airplanes identified in the Costs of Compliance section of this final rule now reflects the number of airplanes of U.S. registry listed in the effectivity of Boeing Special Attention Service Bulletin 737-53-1296, dated January 11, 2011.

### **Request To Revise Compliance Time**

American requested that we revise the initial compliance time for replacing titanium seat track bolts with CRES bolts from 7,000 total flight cycles or within 24 months, to 8,000 total flight cycles or within 60 months (whichever occurs later) after the effective date of this AD. American stated that extending this compliance time would enable operators who have extended their maintenance program in accordance with Boeing maintenance planning documents to accomplish the replacement during the first heavy maintenance visit.

American also asked that, if the compliance time cannot be extended for all airplanes, then the compliance time should be extended for certain airplanes. For example, American has found and replaced sheared bolts with new bolts on airplanes having between 13,000 and 15,000 total flight cycles. Therefore, American concluded that the inspection interval could be extended to 7,000 flight cycles from “bolt replacement” for airplanes for which maintenance records show the seat track bolts were replaced previously. In addition, American stated that the fact it is finding and replacing severed seat track bolts proves that this condition will be detected and corrected by operators during routine maintenance.

We disagree with extending the initial compliance time to 8,000 total flight cycles or 60 months. The inspection threshold of 7,000 total flight cycles was established by the manufacturer at approximately 90 percent of fatigue life. In developing an appropriate compliance time for this action, we considered the manufacturer’s recommendation, the safety implications, parts availability, and maintenance schedules for the timely accomplishment of the inspection.

Affected operators may request approval of an alternative method of compliance (AMOC) for an extension of the compliance times under the provisions of paragraph (j)

of this final rule by submitting data substantiating that the change would provide an acceptable level of safety. We have not changed the final rule in regard to this issue.

### **Request to Allow Re-Sequencing of Steps**

American requested that we remove or reword the Differences Between Proposed AD and Service Bulletin section of the preamble of the NPRM (77 FR 26993, May 8, 2012) regarding the sentence that refers to the sequence of the steps in Boeing Special Attention Service Bulletin 737-53-1296, dated January 11, 2011. American stated that the sentence specifies operators would be required to perform the repair using the sequence of steps in Boeing Special Attention Service Bulletin 737-53-1296, dated January 11, 2011. American stated that this language is “ambiguous” as no sections or figures in that service bulletin are titled “Repair.” Therefore, it is unclear if the NPRM refers to the entire service bulletin or only one portion.

American stated that the sequence of removing and installing bolts, angles, or splice straps from the right side before the left side (or from forward to aft instead of aft to forward) has no impact on safety as long as the final installation of all parts is done in accordance with Boeing Special Attention Service Bulletin 737-53-1296, dated January 11, 2011. American requested that this exception to Boeing Special Attention Service Bulletin 737-53-1296, dated January 11, 2011, be removed or, at a minimum, re-worded to specifically state which sections must be accomplished in the sequence specified in Boeing Special Attention Service Bulletin 737-53-1296, dated January 11, 2011.

We agree that clarification is necessary. Note 1. in paragraph 3.A., “General Information,” of Boeing Special Attention Service Bulletin 737-53-1296, dated January 11, 2011, specifies that “the instructions identified in Paragraph 3.B., Work Instructions, and the Figure(s) give the recommended sequence of steps. The sequence of steps to do this service bulletin can be changed.” We agree that accomplishing the left

side before the right side or accomplishing forward before aft does not have an impact on safety.

However, Note 1. in paragraph 3.A., “General Information” of Boeing Special Attention Service Bulletin 737-53-1296, dated January 11, 2011, suggests this applies to the sequence of steps in the figure(s), which clearly state “in accordance with,” in the Accomplishment Instructions. When the words “in accordance with” are included in a step in the Accomplishment Instructions, the operator must follow the corresponding sequence of steps that are provided. For example, if a step specifies to do a replacement “in accordance with Figure 1,” then the steps within Figure 1 must be done in sequence. This final rule does not dictate the order in which other steps are performed.

#### **Statement Regarding Installation of Winglets**

Aviation Partners Boeing (APB) stated that the installation of winglets per supplemental type certificate (STC) ST00830SE ([http://rgl.faa.gov/Regulatory\\_and\\_Guidance\\_Library/rgstc.nsf/0/408E012E008616A7862578880060456C?OpenDocument&Highlight=st00830se](http://rgl.faa.gov/Regulatory_and_Guidance_Library/rgstc.nsf/0/408E012E008616A7862578880060456C?OpenDocument&Highlight=st00830se)) does not affect the actions specified in the NPRM (77 FR 26993, May 8, 2012).

We concur. STC ST00830SE does not affect the ability to accomplish the actions required by this final rule. Therefore, for airplanes on which STC ST00830SE is installed, a “change in product” alternative method of compliance (AMOC) approval request is not necessary to comply with the requirements of section 39.17 of the Federal Aviation Regulations (14 CFR 39.17).

#### **Request to Include Note Regarding Access**

American requested the following note be added to the NPRM (77 FR 26993, May 8, 2012): “If it is necessary to remove more parts for access, you can remove those parts. If you can get access without removing identified parts, it is not necessary to remove all of the identified parts. Jacking and shoring limitations must be observed.”

American stated that this general information note is needed to remove the ambiguity relating to access required to accomplish the service information, and that it would provide operators additional flexibility.

We agree that clarification is necessary. This general information note was one recently added to Boeing service information to remove the ambiguity. However, Boeing Special Attention Service Bulletin 737-53-1296, dated January 11, 2011, does not contain this note. We acknowledge this information is helpful to remove the ambiguity related to access required to accomplish the actions specified in Boeing Special Attention Service Bulletin 737-53-1296, dated January 11, 2011. We have added similar information in paragraph (g) of this final rule.

**Request to Revise Paragraphs (g) and (h)(2) of the NPRM (77 FR 26993, May 8, 2012)**

AirTran/Southwest Airlines (AirTran/Southwest) requested that we revise the wording in paragraphs (g) and (h)(2) of the NPRM (77 FR 26993, May 8, 2012) that reads "... repair in accordance with a method approved by the Manager, Seattle Aircraft Certification Office (ACO), FAA. For a repair method to be approved, the repair must meet the certification basis of the airplane, and the approval must specifically refer to this AD" to "... repair the seat track using a method approved in accordance with the procedures specified in paragraph (j) of this AD." Southwest stated that this change would allow the ACO or Boeing Commercial Airplanes Organization Designation Authorization (ODA) to approve the repair.

We agree. Paragraph (j)(3) of this AD already allows Boeing Commercial Airplanes ODA to approve repairs if authorized by the Seattle ACO. We have changed paragraphs (g) and (h)(2) of this final rule to refer to paragraph (j) of this final rule, as requested by the commenter.

**Request to Clarify Installation Location in Paragraphs (g) and (h)(2) of the NPRM (77 FR 26993, May 8, 2012)**

AirTran/Southwest requested a note be added to paragraph (i) of the NPRM (77 FR 26993, May 8, 2012) to clarify the location of a splice strap installation. The commenter noted an error in Boeing Special Attention Service Bulletin 737-53-1296, dated January 11, 2011, in Step 1, “Move,” of Figure 10, Sheet 5 of 7; and in Step 1, “Move,” of Figure 12, Sheet 5 of 7. AirTran/Southwest stated the splice strap needs to be centered with left buttock line (LBL) 45.50 and right buttock line (RBL) 45.50, respectively — not LBL 24.75.

We agree that clarification is necessary. The errors noted by AirTran/Southwest are present in Boeing Special Attention Service Bulletin 737-53-1296, dated January 11, 2011. We acknowledge that the splice strap needs to be centered with LBL 45.50 and RBL 45.50, respectively — not LBL 24.75. Therefore, we have added Note 1 to paragraph (i) of this AD to clarify the location of a splice strap installation.

**Request to Delay Issuance of AD**

AirTran/Southwest requested a delay in the issuance of this final rule until Boeing has had time to build up an adequate stock of seat track bolt and splice part kits when frame replacements are required. The commenter stated that Boeing currently has no kits in stock and has a reorder time of 558 days. AirTran/Southwest stated that there would be an economic and operational impact if Boeing has no stock of seat track bolt and splice kits, or if it takes Boeing 558 days to re-stock a kit.

We disagree with the request to delay release of this final rule. Boeing has confirmed that the required kits are available to support of the compliance times specified in this final rule. Should adequate parts not be available approaching the end of the compliance period, paragraph (j) of this final rule provides operators the opportunity to request approval of an alternative compliance time if data are



presented that prove the alternative compliance time will provide an acceptable level of safety. We have not changed this final rule in this regard.

## **Conclusion**

We reviewed the relevant data, considered the comments received, and determined that air safety and the public interest require adopting this AD with the changes described previously and minor editorial changes. We have determined that these changes:

- Are consistent with the intent that was proposed in the NPRM (77 FR 26993, May 8, 2012), for correcting the unsafe condition; and
- Do not add any additional burden upon the public than was already proposed in the NPRM (77 FR 26993, May 8, 2012).

We also determined that these changes will not increase the economic burden on any operator or increase the scope of this AD.

## **Costs of Compliance**

We estimate that this AD affects 973 airplanes of U.S. registry.

We estimate the following costs to comply with this AD:

### **Estimated costs**

<b>Action</b>	<b>Labor cost</b>	<b>Parts cost</b>	<b>Cost per product</b>	<b>Cost on U.S. operators</b>
Replacement of bolts and installation of new splice strap	18 work-hours X \$85 per hour = \$1,530	\$1,991	\$3,521	\$3,425,933
Repetitive inspection	3 work-hours X \$85 per hour = \$255	\$0	\$255	\$248,115

We have received no definitive data that would enable us to provide cost estimates for the on-condition actions specified in this AD.

### **Authority for this Rulemaking**

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. Subtitle VII: Aviation Programs, describes in more detail the scope of the Agency's authority.

We are issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701: "General requirements." Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

### **Regulatory Findings**

This AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify that this AD:

- (1) Is not a "significant regulatory action" under Executive Order 12866,
- (2) Is not a "significant rule" under DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979),
- (3) Will not affect intrastate aviation in Alaska, and
- (4) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

### **List of Subjects in 14 CFR Part 39**

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

## **Adoption of the Amendment**

Accordingly, under the authority delegated to me by the Administrator, the FAA amends 14 CFR part 39 as follows:

### **PART 39 - AIRWORTHINESS DIRECTIVES**

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

#### **§ 39.13 [Amended]**

2. The FAA amends § 39.13 by adding the following new airworthiness directive (AD):

**2013-23-04 The Boeing Company:** Amendment 39-17659; Docket No. FAA-2012-0426; Directorate Identifier 2011-NM-087-AD.

#### **(a) Effective Date**

This AD is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

#### **(b) Affected ADs**

None.

#### **(c) Applicability**

This AD applies to The Boeing Company Model 737-600, -700, -800, -900, and -900ER series airplanes, with passenger seats installed; certificated in any category; as identified in Boeing Special Attention Service Bulletin 737-53-1296, dated January 11, 2011.

#### **(d) Subject**

Joint Aircraft System Component (JASC)/Air Transport Association (ATA) of America Code 53: Fuselage.

**(e) Unsafe Condition**

This AD was prompted by reports that certain seat track bolts were found with severed bolt heads due to fatigue. We are issuing this AD to detect and correct missing or severed bolt heads, which, if not corrected, could result in the inability of the seat track to carry passenger loads, which could cause the seats to detach from the seat track, resulting in possible injury to passengers during an emergency landing or survivable crash.

**(f) Compliance**

Comply with this AD within the compliance times specified, unless already done.

**(g) Seat Track Bolt Replacement and Splice Strap Installation**

Before the accumulation of 7,000 total flight cycles, or within 24 months after the effective date of this AD, whichever occurs later: Replace titanium seat track bolts with corrosion resistant steel (CRES) bolts at both the left and right sides of buttock lines 24.75 and 45.50, in accordance with the Accomplishment Instructions of Boeing Special Attention Service Bulletin 737-53-1296, dated January 11, 2011. If a titanium seat track bolt is found missing from the structure during the accomplishment of the tasks required by paragraph (g) of this AD: Before further flight, do a high frequency eddy current (HFEC) inspection for cracking in the fastener holes and a general visual inspection of the area, including the splice strap and forward seat track for damage, and replace missing bolts with new or serviceable CRES bolts, in accordance with the Accomplishment Instructions of Boeing Special Attention Service Bulletin 737-53-1296, dated January 11, 2011. If cracking or damage is found: Before further flight, repair the seat track using a method approved in accordance with the procedures specified in paragraph (j) of this AD. If it is necessary to remove more parts for access, those parts may be removed. If access can be obtained without removing identified parts, it is not necessary to remove all identified parts. Jacking and shoring limitations should be observed.

**(h) Detailed and HFEC Inspections**

Before the accumulation of 7,000 total flight cycles, or within 24 months after the effective date of this AD, whichever occurs later: Do a detailed inspection and an HFEC inspection for cracking in the holes common to the splice strap and forward seat track at both the left and right sides of buttock lines 24.75 and 45.50, in accordance with the Accomplishment Instructions of Boeing Special Attention Service Bulletin 737-53-1296, dated January 11, 2011. Repeat the inspections thereafter at intervals not to exceed 7,000 flight cycles, until the actions specified in paragraph (i) of this AD have been done.

(1) If a crack is found in the splice strap during any inspection required by paragraph (h) of this AD: Before further flight, replace the seat track bolts and install a new splice strap part number (P/N) 146A5342-26 and retained angle at the affected location, in accordance with the Accomplishment Instructions of Boeing Special Attention Service Bulletin 737-53-1296, dated January 11, 2011.

(2) If a crack is found in the seat track during any inspection required by paragraph (h) of this AD, and Boeing Special Attention Service Bulletin 737-53-1296, dated January 11, 2011, specifies to contact Boeing for appropriate action: Before further flight, repair the seat track using a method approved in accordance with the procedures specified in paragraph (j) of this AD.

**(i) Optional Terminating Action**

Replacing the titanium seat track bolts with CRES bolts on both the left and right sides of buttock lines 24.75 and 45.50 at station 727B, and installing a new splice strap P/N 146A5342-26, in accordance with the Accomplishment Instructions of Boeing Special Attention Service Bulletin 737-53-1296, dated January 11, 2011, terminates the repetitive inspections required by paragraph (h) of this AD.

Note 1 to paragraph (i) of this AD: Boeing Special Attention Service Bulletin 737-53-1296, dated January 11, 2011, contains an error in Step 1, “Move,” of Figure 10, Sheet 5 of 7; and in Step 1, “Move,” of Figure 12, Sheet 5 of 7. The splice strap needs to be centered with left buttock line 45.50 and right buttock line 45.50, respectively — not left buttock line 24.75, as stated in that service bulletin.

**(j) Alternative Methods of Compliance (AMOCs)**

(1) The Manager, Seattle Aircraft Certification Office (ACO), FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the manager of the ACO, send it to the attention of the person identified in paragraph (k) of this AD. Information may be emailed to:

[9-ANM-Seattle-ACO-AMOC-Requests@faa.gov](mailto:9-ANM-Seattle-ACO-AMOC-Requests@faa.gov).

(2) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office.

(3) An AMOC that provides an acceptable level of safety may be used for any repair required by this AD if it is approved by Boeing Commercial Airplanes Organization Designation Authorization (ODA) that has been authorized by the Manager, Seattle ACO, to make those findings. For a repair method to be approved, the repair must meet the certification basis of the airplane, and the approval must specifically refer to this AD.

**(k) Related Information**

For more information about this AD, contact Sarah Piccola, Aerospace Engineer, Cabin Safety and Environmental Systems Branch, ANM-150S, FAA, Seattle Aircraft

Certification Office (ACO), 1601 Lind Avenue SW., Renton, WA 98057-3356; phone: 425-917-6483; fax: 425-917-6590; email: [sarah.piccola@faa.gov](mailto:sarah.piccola@faa.gov).

**(I) Material Incorporated by Reference**

(1) The Director of the Federal Register approved the incorporation by reference (IBR) of the service information listed in this paragraph under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) You must use this service information as applicable to do the actions required by this AD, unless the AD specifies otherwise.

(i) Boeing Special Attention Service Bulletin 737-53-1296, dated January 11, 2011.

(ii) Reserved.

(3) For service information identified in this AD, contact Boeing Commercial Airplanes, Attention: Data & Services Management, P. O. Box 3707, MC 2H-65, Seattle, Washington 98124-2207; telephone 206-544-5000, extension 1; fax 206-766-5680; Internet <https://www.myboeingfleet.com>.

(4) You may view this service information at FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, Washington. For information on the availability of this material at the FAA, call 425-227-1221.

(5) You may view this service information that is incorporated by reference at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202-741-6030, or go to:

<http://www.archives.gov/federal-register/cfr/ibr-locations.html>.

Issued in Renton, Washington, on November 4, 2013.

Stephen P. Boyd,  
Acting Manager,  
Transport Airplane Directorate,  
Aircraft Certification Service.

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